

# BACIDIA ALBIDOPUMBEA (LICHENISED ASCOMYCOTINA) AND ITS TAXONOMIC SYNONYMS IN TASMANIA

GINTARAS KANTVILAS\*

## ABSTRACT

Kantvilas, Gintaras. *Bacidia albidoplumbea* (lichenised Ascomycotina) and its taxonomic synonyms. *Muelleria* 8(1): 43–46 (1993). — *Bacidia albidoplumbea* (J.D. Hook. & Taylor) Hellbom, previously considered endemic to New Zealand, is recorded from Tasmania, and additional descriptive data and illustrations are provided. The names of three Tasmanian taxa, *B. melasemoides* (Jatta) Zahlbr., *B. otagensis* var. *tasmanica* (Jatta) Zahlbr., and *B. weymouthii* (Shirley) Zahlbr., are reduced to synonymy.

## INTRODUCTION

Recent studies of Tasmanian lichens and relevant Australasian type specimens have revealed that three taxa of *Bacidia* are conspecific with *B. albidoplumbea*, a corticolous lichen from New Zealand. First described (as a *Lecidea*) by Hooker & Taylor (1847), this species was later redescribed from New Zealand by Knight, Nylander, Stirton and Zahlbruckner, to the extent that Galloway (1985) recognised seven taxonomic synonyms in the New Zealand flora alone. The present paper clarifies the nomenclature of the species in Tasmania, and provides additional descriptive data.

## TAXONOMY

***Bacidia albidoplumbea*** (J.D. Hook. & Taylor) Hellbom, *Bihang K. Sv. Vet.-Akad. Handl.* 21(3) 13: 99 (1896). — *Lecidea albidoplumbea* J.D. Hook. & Taylor, *Hook. Lond. J. Bot.* 3: 638 (1844); TYPE: 'New Zealand' sine loco [LECTOTYPE *vide* Galloway (1985): BM!].

*Bacidia melasemoides* (Jatta) Zahlbr., *Catal. Lich. Univ.* 4: 252 (1927). — *Raphiospora melasemoides* ['melasenoides'] Jatta, *Boll. Soc. bot. ital.* 8: 258 (1911); TYPE: 'Tasmania meridionalis, ad arbores in monte Wellington, alt. 500 p [ft]', *W.A. Weymouth* (HOLOTYPE: NAP!).

*Bacidia otagensis* (Nyl.) Hellbom var. *tasmanica* (Jatta) Zahlbr., *Catal. Lich. Univ.* 4: 253 (1927). — *Raphiospora otagensis* var. *tasmanica* Jatta, *Boll. Soc. bot. ital.* 8: 258 (1911); TYPE: 'Tasmania, ad truncum Sassafragis prope Geeveston, alt. 1100 p [ft]', *W.A. Weymouth* [LECTOTYPE (selected here): NAP!]; 'Tasmania, ad arbores in monte Wellington, alt. 500 p [ft]', *W.A. Weymouth* (SYNTYPE: NAP!).

*Bacidia weymouthii* (Shirley) Zahlbr., *Catal. Lich. Univ.* 4: 248 (1927). — *Patellaria weymouthii* Shirley, *Pap. Proc. R. Soc. Tasm.* (1893): 217 (1894); TYPE: Tasmania, St. Crispins, Mt Wellington, *W.A. Weymouth* [LECTOTYPE, *vide* Kantvilas (1988a): BRI!]; Tasmania, Mt Wellington, St. Crispins, on bark of tree, 10 Mar. 1891, *W.A. Weymouth* 112 (SYNTYPE: MEL!).

[*Bacidia millegrana auct. non* (Taylor) Zahlbr.: Bratt & Cashin, *Pap. Proc. R. Soc. Tasm.* 110: 144 (1976).]

For synonymy in New Zealand see Galloway (1985).

This species is characterised by a thin, whitish grey to dingy glaucous grey, smooth, crustose thallus, black glossy, lecideine apothecia to *c.* 1.5 mm diameter, with a persistent flexuose margin, an unpigmented hymenium interspersed with numerous oil droplets up to *c.* 4–6 µm diameter, and fusiform-acicular, usually bent, indistinctly 3–7 septate ascospores, 35–65 × 3.5–6(–7) µm.

\* Tasmanian Herbarium, GPO Box 252C, Hobart, Tasmania, Australia 7001.

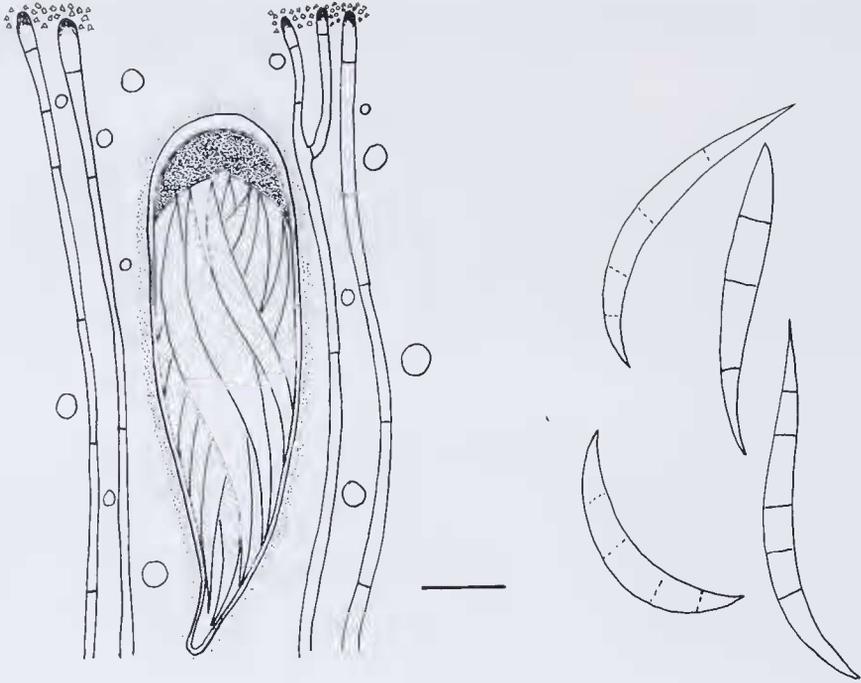


Fig. 1. Portion of hymenium and spores of *Bacidia albidoplumbea* (amyloid portions of ascus stippled). Scale bar = 10  $\mu$ m.

More complete descriptions are provided by Kantvilas & James (1991) (as *B. weymouthii*) and by Galloway (1985). Details of asci, paraphyses and spores are illustrated in Figure 1.

*Bacidia albidoplumbea* has no confusing species in the Tasmanian lichen flora. The genus *Bacidia* includes several additional species, including several currently undetermined, possibly new taxa, but all differ by the pigmentation and morphology of their apothecia, or by their ascospores.

#### REMARKS

***Bacidia albidoplumbea*.** The lectotype consists of two pieces of bark. The thallus is very poorly developed, thin and atypically dull grey. Apothecia are few, mostly immature and in poor condition, but sufficient fertile asci were located for anatomical examination. No chemical substances, apart from trace unknowns, were detected by thin layer chromatography (t.l.c.). Hellbom (1896) attributes the combination in *Bacidia* to Charles Knight, but this is illegitimate and appears to be based solely on his acceptance of Knight's species, *B. subscripta*, as a synonym of *B. albidoplumbea*.

***Bacidia melasemoides*.** The type consists of a small fragment of bark bearing abundant, typical well-developed apothecia. No chemical constituents were detected by t.l.c. The epithet 'melasemoides' which appears in the published description (Jatta 1911) is clearly an orthographic error: 'melasemoides' is handwritten on the specimen label and, furthermore, the name is derived from *Bacidia melasema* Knight, another synonym of *B. albidoplumbea*.

***Bacidia otagensis* var. *tasmanica*.** Both syntypes consist of tiny fragments of bark bearing well-developed, abundantly fertile thalli. In his original description, Jatta (1911) cites dimensions of 80–100  $\times$  2–3  $\mu$ m, but a re-examination of his

material revealed only spores in the range of  $40\text{--}45 \times 3\text{--}4 \mu\text{m}$ , compatible with those typical of *B. albidoplumbea*. Of the two syntypes, the specimen from Mt Wellington has more abundant, well-developed apothecia and is here selected as the lectotype. No chemical constituents were detected in either specimen by t.l.c.

***Bacidia weymouthii***. Two of the three syntypes originally cited by Shirley (1894) have been located. Both represent large, abundantly fertile collections and are typical of the species in Tasmania, i.e. with a conspicuous, pale whitish grey thallus. A trace of atranorin was detected by t.l.c. in the lectotype collection. Typification of this taxon is discussed by Kantvilas (1988a).

***Bacidia millegrana***. This name has been misapplied to several early Tasmanian collections of *B. albidoplumbea* (see Bratt & Cashin 1976). *B. millegrana* is a distinct species with brownish apothecia and spores having up to 13 septa (Taylor 1847, Nylander 1888). First described from Argentina, it has been recorded from New Zealand (Nylander 1888) and mainland Australia (McCarthy 1991). To date there are no substantiated records from Tasmania.

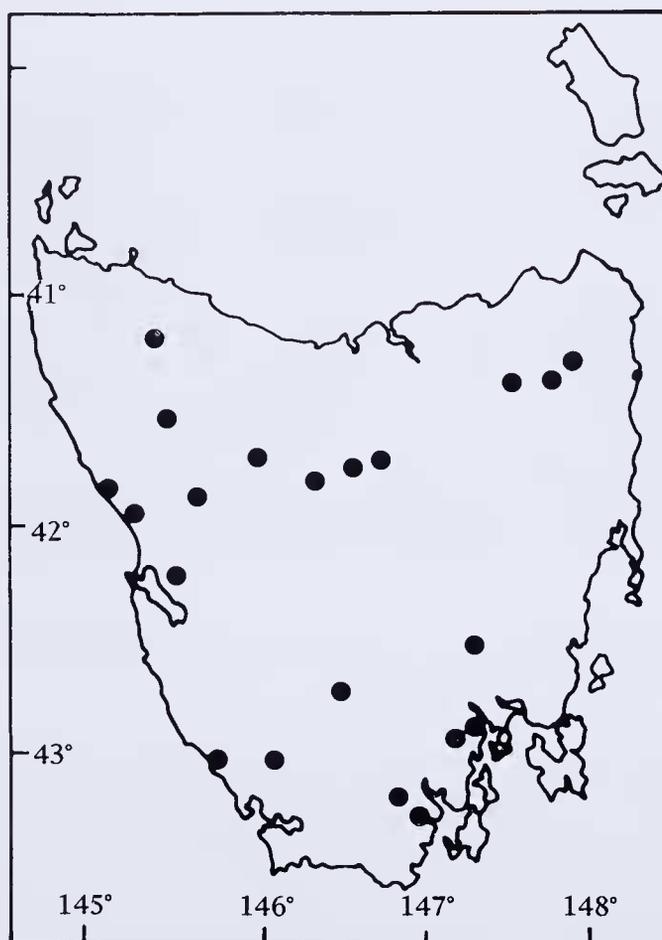


Fig. 2. Tasmanian distribution of *Bacidia albidoplumbea* (based on collections at HO).

## DISTRIBUTION

*Bacidia albidoplumbea* is currently known from New Zealand and Tasmania (Figure 2). In New Zealand, Galloway (1985) notes that the species is widespread, mainly in coastal and lowland areas, on the bark of trees and shrubs such as *Hoheria*, *Dacrydium* and *Sophora*. In Tasmania, the species is common and widespread in cool temperate rainforest where it is a pioneer of twigs and trunks with smooth bark (Kantvilas & James 1991). It occurs in shaded microhabitats and is a prominent component of the *Opegrapha stellata* — *Coccotrema cucurbitula* community of Kantvilas (1988b: 415). Although mostly found on *Atherosperma moschatum*, *B. albidoplumbea* has also been recorded from *Nothofagus cunninghamii* and *Lagarostrobos franklinii*. It is also known from wet sclerophyll forest where it grows as an epiphyte of *Pomaderris apetala* and *Zieria arborescens*.

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